

# DEPARTMENT OF NATURAL RESOURCES AND PARKS



# 2015 ANNUAL REPORT

*Environmental Stewardship  
in King County*



**King County**

Department of  
Natural Resources and Parks





# *Environmental Stewardship In King County*

---

## **TABLE OF CONTENTS**

King County Map, Features and Facilities . . . .	2
Letter from the Executive . . . . .	4
Letter from the Director . . . . .	4
Strategic Initiatives . . . . .	6
2015 DNRP Performance Information . . . . .	7
2015 Awards . . . . .	10
Parks and Recreation Division . . . . .	12
Solid Waste Division . . . . .	14
Wastewater Treatment Division . . . . .	16
Water and Land Resources Division . . . . .	18
DNRP Financials . . . . .	20
How to Contact Us . . . . .	21





# KING COUNTY DEPARTMENT OF NATURAL RESOURCES AND PARKS

## VISION

*Sustainable and livable communities and a clean and healthy natural environment that support a prosperous and resilient economy.*

## MISSION

*Provide regional parks and trails, protect the region's water, air, land, natural habitats and historic properties, and reduce, safely dispose of and create resources from wastewater and solid waste.*

## GOALS

### Environment

*Minimize waste and emissions, maximize resource re-use and recovery, foster environmental stewardship, promote conservation, and protect and restore habitats, ecological functions and aquatic conditions.*

### People and Communities

*Protect and improve human health and safety, foster community-building and healthy living, and preserve and enhance historic properties.*

### Fiscal Responsibility and Economic Vitality

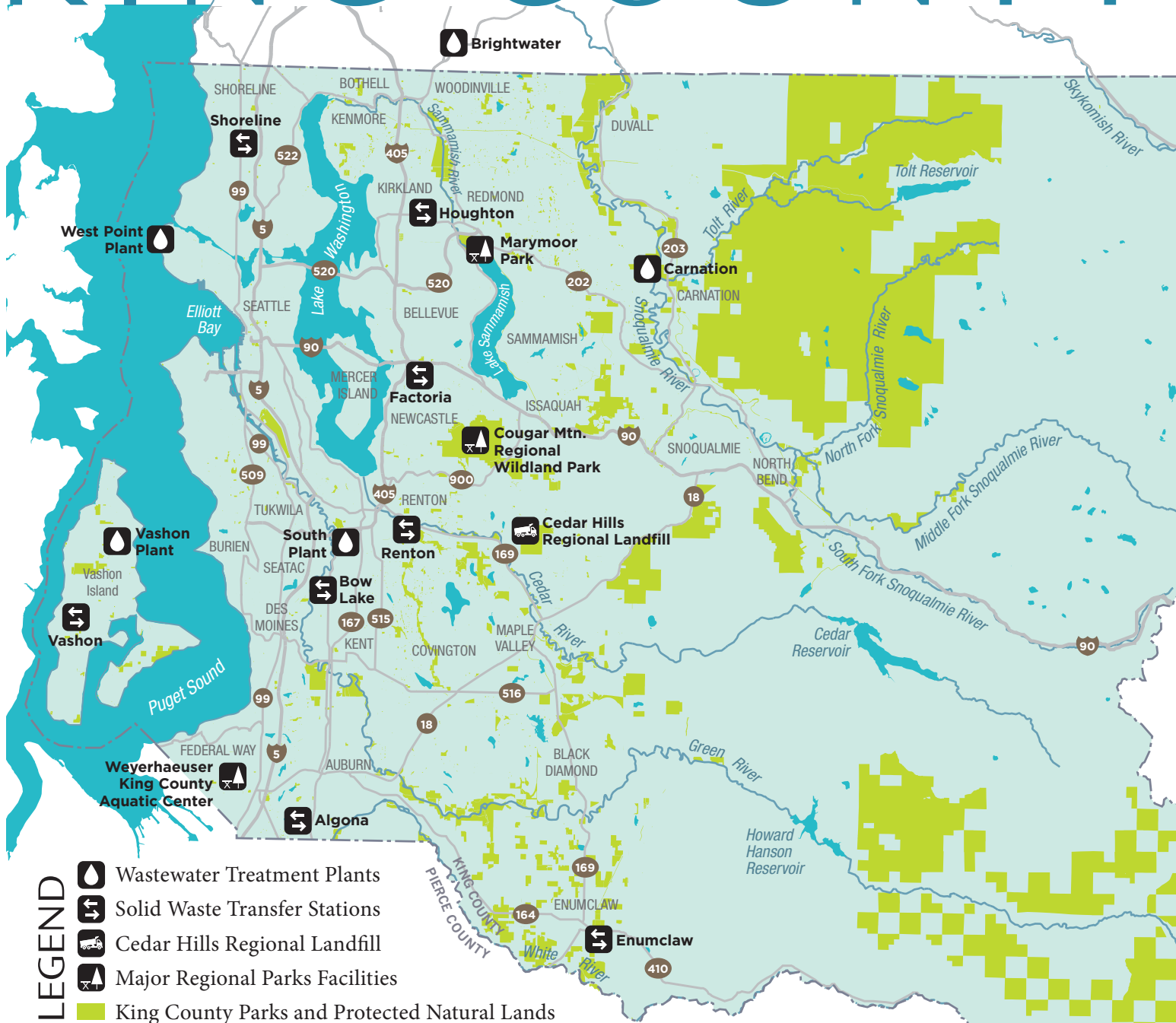
*Support King County's prosperity and ensure ratepayer value through effective, efficient and equitable programs.*

### Quality Workforce

*Develop and empower our most valuable asset – our employees; build internal capacity for excellence, equity and fairness in service delivery.*



# KING COUNTY



## features

39



**38** inches  
average annual  
precipitation

37

**760**

lakes  
and reservoirs

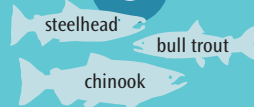
**6** major river  
systems

**3,000** miles  
of streams



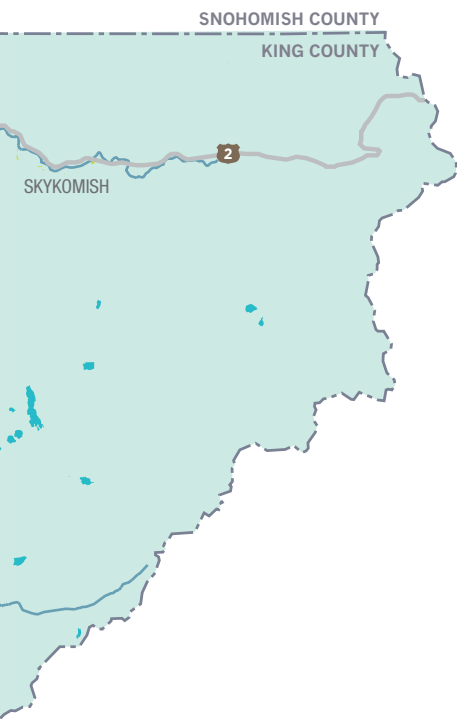
**100** miles  
of marine  
coastline

**3**

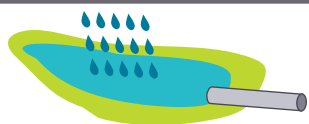
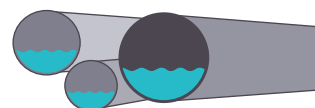


federally  
protected  
salmon species

# by the numbers



**353** miles of underground wastewater pipes and tunnels



**2,369** commercial and residential stormwater control facilities



**4** combined sewer overflow treatment plants



**3** major regional wastewater treatment plants

**2** smaller treatment plants



**920** acres Cedar Hills Regional Landfill



**700** low impact development sites



**8** solid waste transfer stations

**2** rural drop boxes



**500** flood facilities and revetments totaling more than

**119** miles

facilities



**200** parks

**28,000** acres of parks and natural lands

**215** miles of backcountry trails



**850,000** acres of forest lands



**2,131** square miles



**1,931,249** population



**14th** most populated county in the U.S. (out of 3,033)



**975** wetlands

features

## FROM THE EXECUTIVE



Welcome to the King County Department of Natural Resources and Parks Annual Report, *Environmental Stewardship in King County*. This report highlights the department's work to enhance and preserve our environment – the wellspring of our tremendous quality of life.

In this report, you can also learn how DNRP's 1,500 employees play an integral role in implementing my administration's four main policy priorities:

- Addressing climate change with effective policies, practical actions and a belief that we all can take steps to reduce our impacts;
- Providing equitable and fair service delivery through innovation and a commitment to our shared success;
- Strengthening transportation across our county – including a robust and integrated regional trail system; and
- Operating the best-run government, through efficient and cost-effective service delivery.

My administration has an ambitious environmental agenda – and its successful implementation depends on the support and partnership of King County workers.

I want to thank DNRP employees for their great work in 2015, and I look forward to continuing to deliver results that maintain and improve the health and well-being of all King County residents and our environment.

A handwritten signature in black ink that reads "Dow Constantine". The signature is fluid and cursive.

Dow Constantine  
King County Executive

## FROM THE DIRECTOR

Our **commitments** to environmental stewardship and to providing the very best customer service set the tone for the work we do at the King County Department of Natural Resources and Parks.

There are so many ways that we positively influence our residents' quality of life, including providing regional parks and trails, protecting the region's water, air, land, natural habitats and historic properties, and reducing, safely disposing of and creating resources from wastewater and solid waste.

Here are a few highlights:

We had a critical role in updating the **County's 2015 Strategic Climate Action Plan** to reduce carbon pollution and prepare our region for climate change impacts. Actions included leading a Smart Buildings pilot project using new software to track and reduce energy use and carbon emissions at several county buildings.

Our **commitment to equity intensified**, not only by looking at our decisions, programs and practices through an equity lens, but by engaging the community in more meaningful ways. Our Spanish-language outdoor movie sponsorship in White Center was a great chance to share information about County programs and services.

We responded aggressively to the **drought**. Water and Land Resources Division (WLRD) Firewise program employees helped forestland owners stay safe, while WLRD scientists tracked low river levels and high water temperatures – conditions potentially lethal to fish. Our Wastewater Treatment Division (WTD) continued providing drought-proof recycled water for sports fields and golf courses, saving water in the Sammamish River.

The Director's Office and WLRD supported creation of the Local Food Initiative "**Kitchen Cabinet Report**," outlining Executive Constantine's priorities to expand





access to healthy foods and get more locally grown food into kitchens and restaurants. Progress in 2015 included selling Snoqualmie Valley's Tall Chief property to farmers.

The County's **Transfer of Development Rights** agreement with the City of Seattle is steering development away from farms and forests and into cities. In two years, the WLRD-led program has sold \$2 million in development rights to Seattle developers and protected 900 acres of farmland.

Nearly six acres of land along the Duwamish River was acquired for habitat restoration. Because of its location where fresh river water mixes with Puget Sound's saltwater, the **Chinook Wind** site is a high priority for restoration in the Green-Duwamish River Watershed. The restored site will include public access.

King County's first local food and sustainable living festival, **CHOMP!**, took place at Marymoor Park, and featured hands-on activities and demonstrations from local farmers and sustainable businesses, local cuisine and live entertainment.

Our Historic Preservation Program and 4Culture gave \$2.5 million in grant awards for 30 **historic preservation projects**, and established a \$2 million fund for acquisition and redevelopment of historic properties. Another \$500,000 went to the County's "Barn Again" grant program to preserve heritage barns.

King County's Solid Waste Division (SWD) recovered and diverted record levels of cardboard, scrap metal, and clean wood through its **resource recovery** pilot program. In 10 months, the program diverted 2,861 tons out of the waste stream and back into the economy.

SWD and nonprofit Zero Waste Vashon partnered in a **yard and food waste** pilot program at Vashon Recycling and Transfer Station, where residents and businesses can deliver yard and food waste to a designated area of the station for a reduced rate.

WTD leveraged **favorable financial conditions** by refinancing \$728 million in bonds to save \$160 million over 30 years. The state Court of Appeals affirmed a jury verdict awarding the County \$144 million after finding a Brightwater tunneling contractor defaulted on contractual obligations.

WTD made progress on four projects to control combined sewer overflows (CSOs), which are polluted runoff mixed with small amounts of sewage, including the Barton CSO Project, WTD's first **green infrastructure** project, where roadside raingardens will capture and control runoff.

The Parks Division completed construction on the 2.6-mile North Segment of the **East Lake Sammamish Trail**. This is the third segment of the 11-mile-long trail converted from an interim soft-surface to a finished master-planned trail. Two more segments remain.

Parks acquired 345 acres of land that connect to or close gaps in existing **public open space** corridors and provide recreation access, including a missing link on the Foothills Trail between Enumclaw and Buckley, and Squak Mountain acreage in the Issaquah Alps.

I'm extremely proud of this department and its employees, and I hope you are equally proud of yourselves. Wishing you a full year of happiness and success in 2016,

*Christie J. True*



Christie True,  
DNR Director





# STRATEGIC INITIATIVES IN THE DIRECTOR'S OFFICE

*DNRP Director's Office employees help develop strategies for executive initiatives that cross department and division boundaries. Here are highlights of the work accomplished in 2015:*

## Green/Duwamish Initiative

This King County-Seattle partnership aims to improve conditions throughout the Green-Duwamish watershed by helping coordinate the work of local, state, and federal agencies to manage habitat restoration, salmon recovery, flood control and public health. DNRP employees helped stage and promote several Green-Duwamish “swims” by an environmental educator who shared with the public his experiences of swimming much of the river’s 85-mile length over the year.

## Climate change

The department continued its pursuit of carbon neutral and beyond. Director's Office employees updated the DNRP carbon emissions inventory, with a third-party review beginning at year's end. This group's work was instrumental to completing the King County Strategic Climate Action Plan to confront climate change in all areas of County operations and in the community. The King County-Cities Climate Collaboration group continued to find success in reducing regional emissions and creating clean-energy jobs.

## Salmon recovery

The ongoing partnership between King County, state, federal, local and tribal governments, NGOs and residents to restore Lake Sammamish kokanee salmon had a successful 2015, including releasing young kokanee hatched from wild fish and spawned at the Issaquah Hatchery. DNRP employees advanced habitat restoration and public outreach projects important to long-term salmon recovery.

## Energy planning

Renewable energy production at Cedar Hills Regional Landfill, and South and West Point wastewater treatment plants helped the County exceed its goal of generating or procuring the equivalent of 50 percent of

its energy needs from renewable sources. The County also met its 2015 goal of reducing facility energy use by 15 percent, saving more than \$3 million annually. Employees helped establish and implement new energy targets for County government and the broader community through the King County Strategic Climate Action Plan.

## Performance management

DNRP uses performance information to seek guidance from stakeholders and elected leaders, target resource use, clarify direction for employees, and improve overall service delivery. DNRP performance systems are focused on implementing the County strategic plan and meeting departmental work program expectations.

## Local food economy

After helping launch Executive Constantine's Local Food Initiative in 2014, Director's Office employees helped the Kitchen Cabinet conclude its work in early 2015 and produce a report establishing goals, targets and a work plan. Work shifted to implement the actions in the report, including returning historic Snoqualmie Valley farmland to active farming, and hosting CHOMP!, a local food festival highlighting the quality and variety of local food.

## Historic preservation

Employees helped develop design guidelines for Kent's Mill Creek Historic District; worked to identify and protect Kirkland mid-century modern resources; and designated Snoqualmie's 1899 Northern Pacific Railway locomotive a landmark. They also participated in an archaeological excavation of the historic Japanese bathhouse at Neely Mansion in Auburn, and partnered with 4Culture to develop the \$5 million Saving Landmarks, Barn Again, and Preservation Action Fund and rehabilitation programs.



## Community Service Areas (CSAs)

Work continued to heighten public engagement and improve communication with unincorporated King County residents, including another round of 36 Community Service Area grants totaling \$60,000. Grants offer residents the chance to participate and be more connected in their communities. Numerous King County officials participated in a series of CSA meetings that gave citizens the ability to learn about services, discuss issues and ask questions.

## Eastside Rail Corridor

DNRP employees drafted legislation that the County Council approved to begin rail removal and planning for an interim trail in the County's portion of the corridor. Work in 2016 includes advancing both planning rail removal and developing a 1.3-mile-long interim trail to connect with Kirkland's trail and to a trail being built along State Route 520. Planning will also start in 2016 to bridge I-405 and Northeast 8th Street in Bellevue.

## Equity and Social Justice in DNRP

In 2015, the King County Office of Equity and Social Justice coordinated internal and external engagements to learn about priorities to improve equity in County operations, service delivery and collaboration for development of a strategic plan.

DNRP reached out to agency employees and leadership in series of dialogues, concerns about, and ambitions for, equity and social justice. We also asked and listened

to external stakeholders, collaborators, and customers to gain their perspectives.

This process informed our emerging Equity and Social Justice (ESJ) work program, which is organized by five goal areas to drive equity and social justice policy intent into all activities:

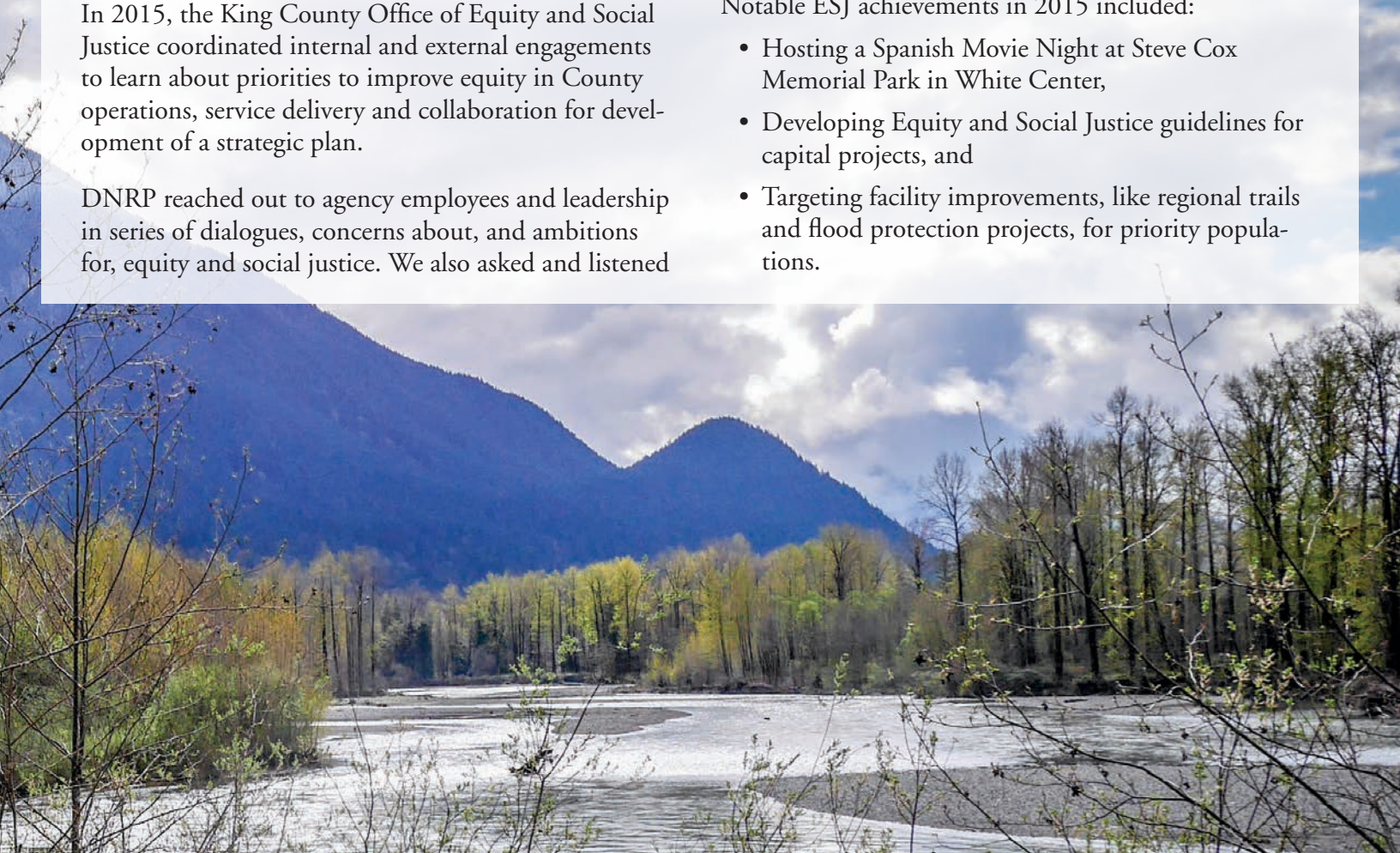
- Work force, work place and work processes,
- Communication, education and partnering,
- Plans, policy, rates and budgets,
- Operations, program and product delivery, and
- Facility and system improvements.

Progress is coordinated at the department level by an ESJ team with support from each division to:

- Develop and implement actions that address organizational capacity gaps,
- Align to and support countywide and regional priorities, and
- Coordinate with agencies, jurisdictions, and community organizations.

Notable ESJ achievements in 2015 included:

- Hosting a Spanish Movie Night at Steve Cox Memorial Park in White Center,
- Developing Equity and Social Justice guidelines for capital projects, and
- Targeting facility improvements, like regional trails and flood protection projects, for priority populations.

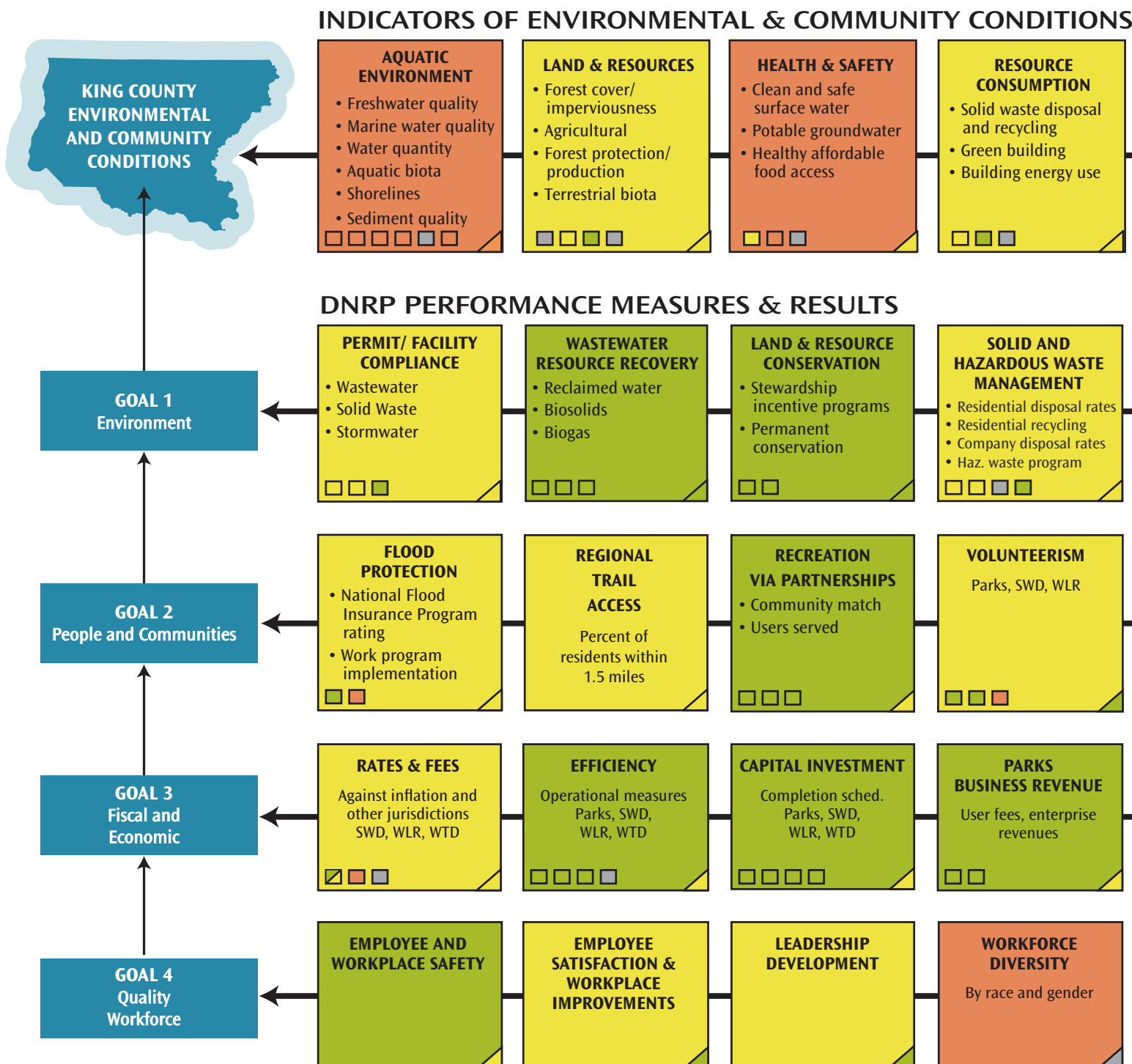


# 2015 PERFORMANCE SUMMARY

## Performance improvement

The King County Department of Natural Resources and Parks has a performance-oriented culture that is supported by leadership priorities, employee values, and a long history of using performance information to:

- Strengthen accountability with elected leaders, ratepayers, residents, and other stakeholders,
- Learn about program effectiveness to guide continuous improvements,
- Foster engagement with regional partners by clarifying outcomes we seek, and
- Convey organizational priorities and expectations to employees.





Our online performance report includes data on environmental and community conditions in King County and annual results for efficiencies, resources recovery, customer satisfaction, and related topics.

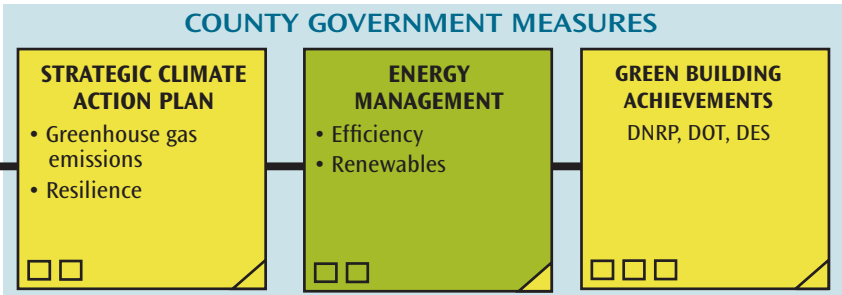
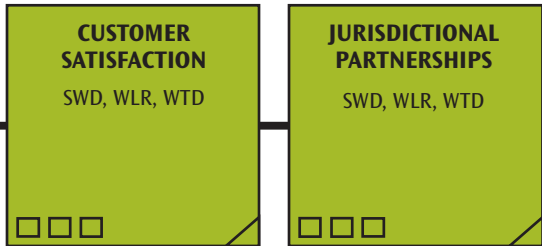
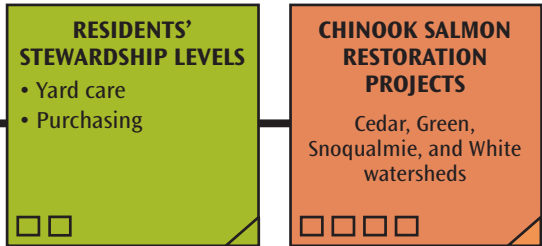
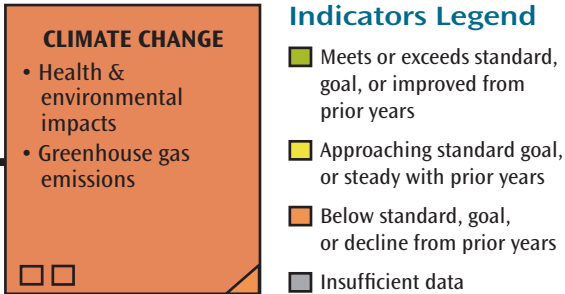
Our community scale data collection efforts help employees diagnose problem areas, guide resource allocation, and understand the degree that our actions are resulting in the improvements we intend.

In support of the goals of the King County Strategic Plan, DNRP is achieving process efficiencies and improving customer service through Lean continuous improvement techniques and Line of Business planning.

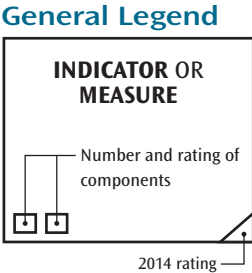
We are investing in leadership and staff development to build competencies that improve performance and help us achieve our organizational goals of environmental quality, healthy people and communities, fiscal stewardship and a quality workforce.

Many thanks to the DNRP employees who drive performance improvements on a routine basis and to our customers and stakeholders who provide the feedback we use to improve our service.

We appreciate your help on our journey of continuous improvement.



- DNRP Goals**
- Environment**  
Minimize waste and emissions, maximize resource re-use and recovery, foster environmental stewardship, promote conservation, and protect and restore habitats, ecological functions and aquatic conditions.
  - People and Communities**  
Protect and improve human health and safety, foster community-building and healthy living, and preserve and enhance historic properties.
  - Fiscal Responsibility and Economic Vitality**  
Support King County's prosperity and ensure ratepayer value through effective, efficient and equitable programs.
  - Quality Workforce**  
Develop and empower our most valuable asset – our employees; build internal capacity for excellence, equity and fairness in service delivery.



- Acronyms**
- DOT** Department of Transportation
  - FMD** Facilities Management Division
  - SWD** Solid Waste Division
  - WLR** Water & Land Resources Division
  - WTD** Wastewater Treatment Division

For more information, see [your.kingcounty.gov/dnrp/measures/default.aspx](http://your.kingcounty.gov/dnrp/measures/default.aspx)

- Performance Measures Legend**
- Meets or exceeds target (green)
  - Approaches target (less than 10% away from target) (yellow)
  - Needs improvement (more than 10% away from target) (orange)
  - Insufficient data (grey)

# 2015 AWARDS

## International

### Brightwater Education and Community Center

Wastewater Treatment Division  
*Public Education Program of the Year*  
WaterReuse

## National

### Brightwater Treatment Plant

Wastewater Treatment Division  
*Peak Performance Award – Silver*  
National Association of Clean Water Agencies

### Carnation Treatment Plant

Wastewater Treatment Division  
*Peak Performance Award – Gold*  
National Association of Clean Water Agencies

### Don't Drip and Drive Campaign

Water and Land Resources Division, Stormwater Services Section and Stormwater Outreach for Regional Municipalities  
*Communicator Award*  
Public Relations Society of America

### Interagency Resource for Achieving Cooperation's Marijuana Regulatory Guidance Workgroup

Local Hazardous Waste Management Program  
*Excellence in Regulatory and Industry Collaboration Award*  
North American Hazardous Materials Management Association

### South Magnolia CSO Control Gravity Sewer Pipeline

Wastewater Treatment Division  
*New Installation Project of the Year – Honorable Mention*  
Trenchless Technology

### South Treatment Plant

Wastewater Treatment Division  
*Peak Performance Award – Platinum*  
National Association of Clean Water Agencies

### Vashon Treatment Plant

Wastewater Treatment Division  
*Peak Performance Award – Gold*  
National Association of Clean Water Agencies

### West Point Treatment Plant

Wastewater Treatment Division  
*Peak Performance Award – Platinum*  
National Association of Clean Water Agencies

### West Point Treatment Plant Energy Purchasing Partnerships

Wastewater Treatment Division  
*Outstanding Case Study Award*  
Sustainable Purchasing Leadership Council

## State

### Carnation Treatment Plant

Wastewater Treatment Division  
*Outstanding Wastewater Treatment Plant Award*  
Washington State Department of Ecology

### King County River Recreation Study

Water and Land Resources Division, River and Floodplain Management Section  
*Tom F. Warren Water Safety Award for Innovation*  
Washington State Drowning Prevention Network

### South Treatment Plant

Wastewater Treatment Division  
*Outstanding Wastewater Treatment Plant Award*  
Washington State Department of Ecology

### Transfer of Development Rights Program

Water and Land Resources Division, Rural and Regional Services Section  
*Washington State Growth Management Lifetime Achievement Award*  
Washington State Department of Commerce



## **Vashon Treatment Plant**

Wastewater Treatment Division

*Outstanding Wastewater Treatment Plant Award*

Washington State Department of Ecology

## **Regional**

### **Interagency Resource for Achieving Cooperation's Marijuana Regulatory Guidance Workgroup**

Water and Land Resources Division, Rural and Regional Services and Local Hazardous Waste Management Program

*Outstanding Program Innovation Award*

North American Hazardous Materials Management Association, Northwest Chapter

### **Grow Smart, Grow Safe®**

Local Hazardous Waste Management Program

*Outstanding Multi-agency Collaboration Award*

North American Hazardous Materials Management Association, Northwest Chapter

## **Extranet**

Local Hazardous Waste Management Program

*Best Innovative Use of Technology Award*

North American Hazardous Materials Management Association, Northwest Chapter

## **Local Hazardous Waste Management Program**

Solid Waste Division,

Recycling and Environmental Services Section

*Outstanding Policy Work Award*

North American Hazardous Materials Management Association, Northwest Chapter


## **Local**

### **Career Fair Booths**

Solid Waste Division

*People's Choice*

Washington Women in Trades Career Fair



Each day, King County DNRP employees prove their commitment to innovation, conservation and equity. I want to thank all of you for your hard work, as we strive to provide exceptional customer service while safeguarding our county's high quality of life.

Christie True, DNRP Director



# PARKS AND RECREATION DIVISION

## MISSION

*Steward, enhance and acquire parks to inspire healthy communities.*



*Student volunteers plant trees along the East Lake Sammamish Trail.*

## What We Do

The Parks and Recreation Division (Parks) stewards 200 parks, 175 miles of regional trails, and 28,000 acres of open space, including Cougar Mountain Regional Wildland Park, Marymoor Park, and the Weyerhaeuser King County Aquatic Center. By cultivating strong relationships with non-profit, corporate and community partners, Parks provides recreational opportunities and protects the region's public lands, leaving a legacy for future generations.

## 2015 Accomplishments

### *Open space protection*

Parks protected an additional 625 acres of open space, further enhancing recreational opportunities, protecting habitat for fish and wildlife, and conserving our region's natural heritage. In addition to 122 acres at Patterson Creek Natural Area and 50 acres at Rattlesnake Ridge, Parks acquired more than 90 acres on Vashon Island as part of a long-term effort to connect Quartermaster Harbor to the town center.

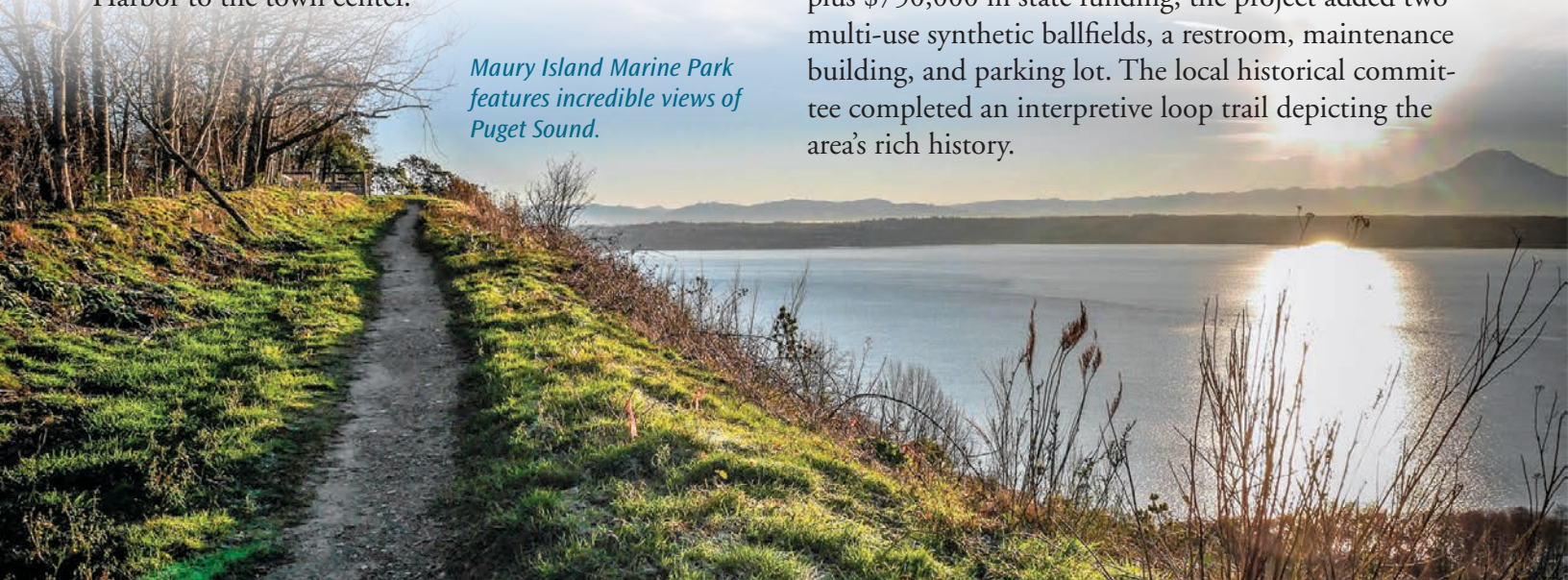
*Maury Island Marine Park features incredible views of Puget Sound.*

### *Regional trails*

Parks finished construction of a 2.6-mile-long section of the East Lake Sammamish Trail (ELST), completing a total of six miles of the 11-mile-long trail. A smooth surface, soft-surface shoulders, intersection treatments and other features make the trail safer and more accessible. Completing the ELST is the final link in a 44-mile-long paved, multi-use, non-motorized corridor extending from Ballard to the Cascade Foothills. Parks also broke ground on the 16-mile-long Lake to Sound Trail, starting construction on a 1.45-mile-long segment in SeaTac and Burien. This segment is anticipated for completion in mid-2016.

### *Community partnerships and youth sports facilities*

Parks, the Ravensdale Park Foundation and the City of Maple Valley, completed the second phase in the transformation of Ravensdale Park into a rural recreation destination. Leveraging \$2 million each from Parks, the City of Maple Valley, and Ravensdale Park Foundation's fundraising, in-kind services, and community support, plus \$750,000 in state funding, the project added two multi-use synthetic ballfields, a restroom, maintenance building, and parking lot. The local historical committee completed an interpretive loop trail depicting the area's rich history.





With support of multiple community partners, Parks broke ground on mountain bike trails at Black Diamond Open Space, a 1,100-acre park in south King County. In partnership with Evergreen Mountain Bike Alliance, a new beginner-level trail loop was completed. Trails for more advanced riders, including for competitions and practice by the Washington Student Cycling League, should be completed by fall 2016.

Parks awarded \$837,880 in Youth Sports Facilities Grants to 14 projects, leveraging \$2.6 million in matching funding from local cities, schools and youth recreation and community groups. Partnerships support new and improved playgrounds, sports fields, and skate facilities, plus a bicycle riding learning area, among other projects. King County has awarded \$14 million in grants since the program's inception, creating more than 340 new or renovated facilities.

### *Volunteers*

Some 10,000 volunteers gave more than 70,000 hours of service at 510 volunteer events in 2015. They helped build backcountry trails, clear litter, plant native trees and shrubs, and remove invasive species.

### *Major events and business development*

Parks surpassed its annual business revenue target in 2015, securing \$5.8 million in revenue from major events, facility rentals, corporate sponsorships and other activities to support operations and maintenance of the division's parks and trails. At Marymoor, Cirque du Soleil ran another successful performance series, while AEG Live booked a strong summer concert line-up that set records for attendance and the most sold-out shows



*First-annual CHOMP! festival held at Marymoor Park highlights sustainability, local food, and more.*

since the series started more than a decade ago. The Weyerhaeuser King County Aquatic Center hosted the AT&T Winter National Championships in December, a high profile swimming event that featured Olympians Michael Phelps, Nathan Adrian and Missy Franklin.

Parks coordinated the inaugural CHOMP! festival, a new King County-sponsored, family-friendly local food and sustainable living event at Marymoor Park. Planning is underway for the second festival, which returns to Marymoor in summer 2016.

## **Outlook**

As the division enters the third year of its six-year levy in 2016, Parks will achieve major milestones that demonstrate steady progress toward the vision set forth in its levy. Key among those milestones is progress developing the Eastside Rail Corridor. Early in 2016, Parks will release the draft Master Trail Plan and Environmental Impact Statement, and in early 2017, Parks expects to begin removing outdated rails to build an interim trail.

The division will continue to improve access to its facilities, another goal of the levy. That includes launching a new online facility scheduling system to streamline the rental process, and working with communities, user groups, and park and trails visitors to plan for facility improvements, additional trailheads and parking lots, and forest stewardship.

*A.R. Rahman performs at the Marymoor Park Concert Series.*





# SOLID WASTE DIVISION

## MISSION

*The Solid Waste Division brings the best people together to deliver value to our customers and to stakeholders and continuously improve waste prevention, resource recovery, and waste disposal.*

## What We Do

The Solid Waste Division is a forward-thinking organization that provides environmentally responsible solid waste transfer and disposal services in King County. The division operates eight transfer stations, two rural drop boxes, and the Cedar Hills Regional Landfill – the only operational landfill in the county. Our stakeholders include residents and business owners in unincorporated King County and 37 cities throughout the county. The division works closely with our stakeholders to continue its national leadership in waste prevention, resource recovery, and waste disposal.



## 2015 Accomplishments

### Waste prevention

This year saw the power of teamwork as we sought to prevent waste from even entering our system.

A partnership with a nonprofit organization of Vashon-Maury Island residents allowed us to begin a year-long yard and food waste pilot program at the Vashon Recycling and Transfer Station. In the program's first two months, more than 76 ½ tons of yard and food waste was diverted from the landfill to Cedar Grove Composting.

Another collaboration with regional construction and demolition debris (C&D) processors and recyclers resulted in innovative policies that seek to enhance the amount of C&D recycling.

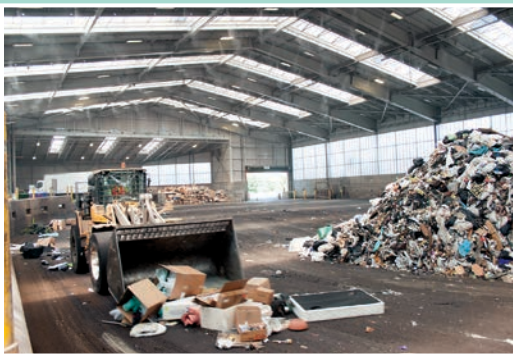
The division also partnered with the King County Sheriff's Office to dedicate a detective to educate and enforce these rules within the C&D industry.

Together with Seattle Public Utilities, we began the Threadcycle campaign to bring together partners throughout the region in a program that educates and encourages residents to donate used and unwanted clothes, shoes, and linens, rather than throwing them out.

*Compared to 2014, total tonnage of garbage and yard waste disposed at our transfer stations and the Cedar Hills Regional Landfill in 2015 grew by 2.8 percent, about 24,500 tons, to 880,703 total tons.*







### Resource recovery

In 2015 our Resource Recovery Pilot Program remained an important initiative as we continue to strive for a 70 percent recycling rate and zero waste of resources. The program targets and recovers cardboard, clean wood, and scrap metal from the waste stream and puts these valuable resources back into the economy. In the first 12 months of the program we successfully recovered an additional 1,533 tons of materials, preventing 135 truckloads of valuable materials from going to the landfill.

In November, the King County Council approved expansion of the program at the Bow Lake, Shoreline, and Enumclaw recycling and transfer stations.

BioEnergy Washington (BEW), which contracts with the division to process landfill gas into pipeline-quality Renewable Natural Gas for sale to Puget Sound Energy, continues to purify landfill gas into usable methane. In 2015, the BEW plant purified an amount of gas equivalent to meeting the annual natural gas needs of 19,000 homes. This monetization of the landfill gas is proving to be a lucrative option for the division, with approximately \$1.3 million of revenue generated by King County for the raw landfill gas sold to BEW in 2015.

### Waste disposal

Compared to 2014, total tonnage in 2015 grew by 2.8 percent, about 24,500 tons, to 880,703 total tons of garbage and yard waste disposed at our transfer stations and the Cedar Hills Regional Landfill.

We continued to update our transfer system by building and siting new facilities and analyzing other options. Substantial work was completed on the new Factoria Recycling and Transfer Station, which remained on schedule and under budget. This new facility replaces the 50-year-old station in Bellevue and will provide our

customers with an efficient facility offering many recycling and household hazardous waste disposal services.

### Employee experience

In 2015 we issued an employee satisfaction survey to follow up on a similar survey issued in 2013. The 2015 survey showed the division improved in every category and enhanced our employee experience.

Our efforts to enhance Equity and Social Justice (ESJ) in the division expanded with new training opportunities, the development of an opportunity fund that specifically sets aside money for ESJ-related projects, and a new set of recruitment standards to amplify our diversity.

To ensure we continually improve our work, we expanded Lean training and implementation, and achieved new efficiencies in finance and operations functions. These efficiencies allow us to offer the best service at the lowest cost.

### Outlook

In 2016, we will begin testing a new pilot program to determine the feasibility of using compressed natural gas (CNG) to fuel our fleet. This means we could potentially fuel our trucks and equipment with CNG coming directly from the landfill, reducing our carbon emissions.

Next year will also see the opening of the new Factoria Recycling and Transfer Station, further expansion of the Resource Recovery Pilot Program, and publication of our 10-year business plan to guide our work for the next decade.



# WASTEWATER TREATMENT DIVISION

## MISSION

*King County's Wastewater Treatment Division (WTD) protects public health and enhances the environment by collecting and treating wastewater while recycling valuable resources for the Puget Sound region.*

## What We Do

WTD is an innovative clean-water enterprise that protects public health and water quality by providing wholesale wastewater treatment services to 17 cities, 17 local sewer districts and more than 1.6 million residents across a 420-square-mile area in King, Snohomish and Pierce counties.

The division's 630 employees manage the regional system of treatment plants, pipelines and pump stations that operate 24/7. They also plan and design new facilities, regulate the disposal of industrial waste, educate the public and businesses on pollution prevention, and pursue innovation by recycling resources to support sustainable communities.



*Al Noor Mosque in White Center celebrated completion of a rain garden and cistern project funded by WTD's RainWise Program partnership with Seattle Public Utilities. The program supports the reduction of combined sewer overflows.*

## 2015 Accomplishments

### *Plant operation*

All five treatment plants attained 100 percent compliance in meeting federal and state effluent limits. The Vashon, Carnation and South treatment plants earned the Washington State Department of Ecology's "Outstanding Performance Award" for perfect compliance with all permit conditions in the prior calendar year.

The division completed negotiations with the state Department of Ecology to renew the National Pollutant Discharge Elimination System permit for West Point Treatment Plant.

### *Resource recovery and recycling*

The 2015 drought brought new focus on the division's recycled water program. Under new agreements, WTD supplied recycled water from its Brightwater Treatment Plant to the Lake Washington Youth Soccer Association's fields at 60 Acres Park and to the City of Kirkland for municipal uses.

The division sought approval from the Utilities and Transportation Commission to transport biomethane gas from South Treatment Plant to filling stations for compressed natural gas vehicles, which will be an additional revenue source for WTD's energy products.

One-hundred percent of the division's Loop® biosolids were recycled for use in forestry, agriculture and commercial composting applications, and demand for this nutrient-rich resource remained strong.

### *Education, outreach and community services*

Environmental education remains popular with schools and community members. In 2015, WTD guided more than 15,000 people through Brightwater's exhibit hall, as well as tours, lectures and workshops. The division also pilot tested a high school internship program to interest local youth in wastewater careers.

### *Pollution control and cleanup*

In 2015, WTD met compliance schedule requirements and project milestones for its Combined Sewer Overflow Control Program by completing construction on



projects in Magnolia, North Beach and West Seattle to control overflows that occur during heavy rains.

In 2015, WTD awarded \$100,980 in funding to Duwamish-area community projects through its Green Grants program. The grants were part of a settlement agreement with Puget Sound Clean Air Agency to resolve issues stemming from the West Point Treatment Plant's raw sewage pump engines.

WTD continued its engagement with EPA, City of Seattle, Port of Seattle, and Boeing on the Lower Duwamish Superfund Cleanup.

### *Finance and administration*

Solid credit ratings and favorable financial markets continued to benefit WTD's ratepayers and customers. The division refinanced \$728 million in bonds that will save \$160 million over the next 30 years, and secured \$105 million in new funding for its capital program at the lowest interest rate since the 1960s.

Moody's and Standard & Poor's affirmed their respective ratings of WTD's sewer revenue bonds at Aa2 and AA+, citing the utility's strong management practices, consistent financial performance and bright regional economic outlook.

In December, the Washington State Court of Appeals affirmed a 2012 jury verdict awarding King County \$144 million in damages and attorney's fees after finding a Brightwater tunneling contractor defaulted on key contractual obligations, which will mean less borrowing to fund future projects.

The County Council adopted a monthly wholesale sewer rate of \$42.03 through Jan. 1, 2017, which is unchanged from the rate adopted in June 2015. The capacity charge levied to newly connecting customers was raised for inflation from \$57 to \$58.70.

### *Capital projects*

The division invested \$170 million in capital improvement projects to add system capacity, replace or rehabilitate aging facilities, and enable efficient operations.

WTD completed the Barton Pump Station Project in West Seattle. New capacity and electrical and pumping

equipment will improve service while protecting the environment from overflows of stormwater and sewage during heavy rains.

Work continued on the North Creek Interceptor Project to replace and rehabilitate nearly two miles of aging sewer line in Bothell, and construction began in Fremont to replace an aging siphon beneath the Lake Washington Ship Canal.

Construction is wrapping up on a new 48-foot environmental research vessel that will enable research scientists to more efficiently collect vital data needed to protect Puget Sound, Lake Washington and the Duwamish River.

## **Outlook**

In 2016 and beyond, the division will maintain its commitment to service excellence by increasing efficiency through Lean and Continuous Improvement, meeting or surpassing permit requirements, exploring new technologies and markets for its recycled products, and investing in its asset management and capital improvement programs.



*From engineering to communication, WTD's popular internship program gave dozens of high school and college students real-life experience in the environmental field.*

*WTD completed its first major green infrastructure project in West Seattle, installing 91 roadside rain gardens to support its goal to control overflows of stormwater and sewage into Puget Sound during heavy rains.*



# WATER AND LAND RESOURCES DIVISION

## MISSION

*King County Water and Land Resources Division is helping to protect King County's water and lands so that its citizens can enjoy them safely today, and for generations to come.*

## What We Do

Water and Land Resources Division (WLRD) employees protect the health and integrity of King County's natural resources. The division provides flood control, stormwater management, water quality, and natural resource management services throughout the county.

The division also operates the Environmental Lab and Science Section, which provides environmental monitoring, data analysis, management and modeling services to many county departments and other jurisdictions. Additionally, WLRD houses the King County Hazardous Waste Management Program – a King County-cities collaboration.

The division manages the Stormwater Management Program for unincorporated King County, and oversees the River and Floodplain Management Program, which provides flood control services on all county rivers. The division also houses the salmon recovery forums; as well as programs that acquire open space, restore habitat and control noxious weeds; plus programs that provide economic and technical support for forestry and agriculture.



## 2015 Accomplishments

### *Stormwater services*

Stormwater section employees worked with Roads Services Division employees to inventory drainage facilities under County roads, and shared resources to better deliver service to the public.

Stormwater employees also completed more than 1,300 inspections of public and private facilities to schedule preventative maintenance and improve performance, while an additional 350 inspections of new, low impact development “RainWise” facilities were also completed.

To help improve drainage, employees partnered with the King Conservation District and farmers to remove sediment and invasive vegetation from more than two miles of agricultural waterways.

### *Rural and regional services*

Several high-profile restoration projects were completed in 2015, including:

- Creating and enhancing wetland and streamside habitats along the Cedar River at the Elliott Bridge habitat and floodplain reconnection project;
- Removing fill and concrete rubble to restore shorelines at the Maury Island Natural Area;
- Restoring the confluence of Mackey and Bear creeks, including returning the banks to their natural condition and wetland restoration; and
- Establishing native vegetation on more than one acre of riparian area and 400-plus feet of marine shoreline at Raab's Lagoon.

New interlocal agreements were reached with the Water Resource Inventory Areas to advance salmon restoration activities for the next decade.

The Local Hazardous Waste Management Program provided assistance and financial incentives to more than 1,000 business customers and 3,500 people.

Noxious Weed Program employees worked with more than 4,000 landowners to manage 12,000 weed infestations across King County, including controlling all Class A noxious weed infestations.



Employees also began implementing the King County Local Food Initiative, including developing a “one-stop shop” for agricultural technical assistance and bringing more than 400 acres of farmland back into production.

### *River and floodplain management*

Employees maintained the nation’s highest floodplain management rating of any county government, saving unincorporated King County flood insurance policy-holders more than \$830,000.

The Flood Warning Center was activated six times in 2015 in response to flooding on the Snoqualmie, Tolt, Green, Cedar and Skykomish rivers.

Employees managed the Sinnema Quaale revetment replacement on the Snoqualmie River, and completed stakeholder outreach in design and/or permitting for:

- Countyline and Right Bank levee in Pacific;
- Willowmoor transition zone work on the Sammamish River; and
- Tolt Pipeline Protection project near Duvall.

Corridor planning work was done in the Green, South Fork Snoqualmie, Tolt and Cedar river drainages.

Additional public-safety work included purchasing 50 acres of frequently flooded land, entering into cost-share agreements to complete nine home elevations and 12 more projects underway to mitigate flood risks on private property.

### *Science and environmental lab*

The Science Section completed six multi-year, applied-science projects funded by federal grants to improve water quality and environmental protection in King County.

The Environmental Lab set a new production record of more than 600,000 parameters analyzed, while maintaining an analytical accuracy rating of 99.8 percent. The lab also ordered a new King County research vessel.

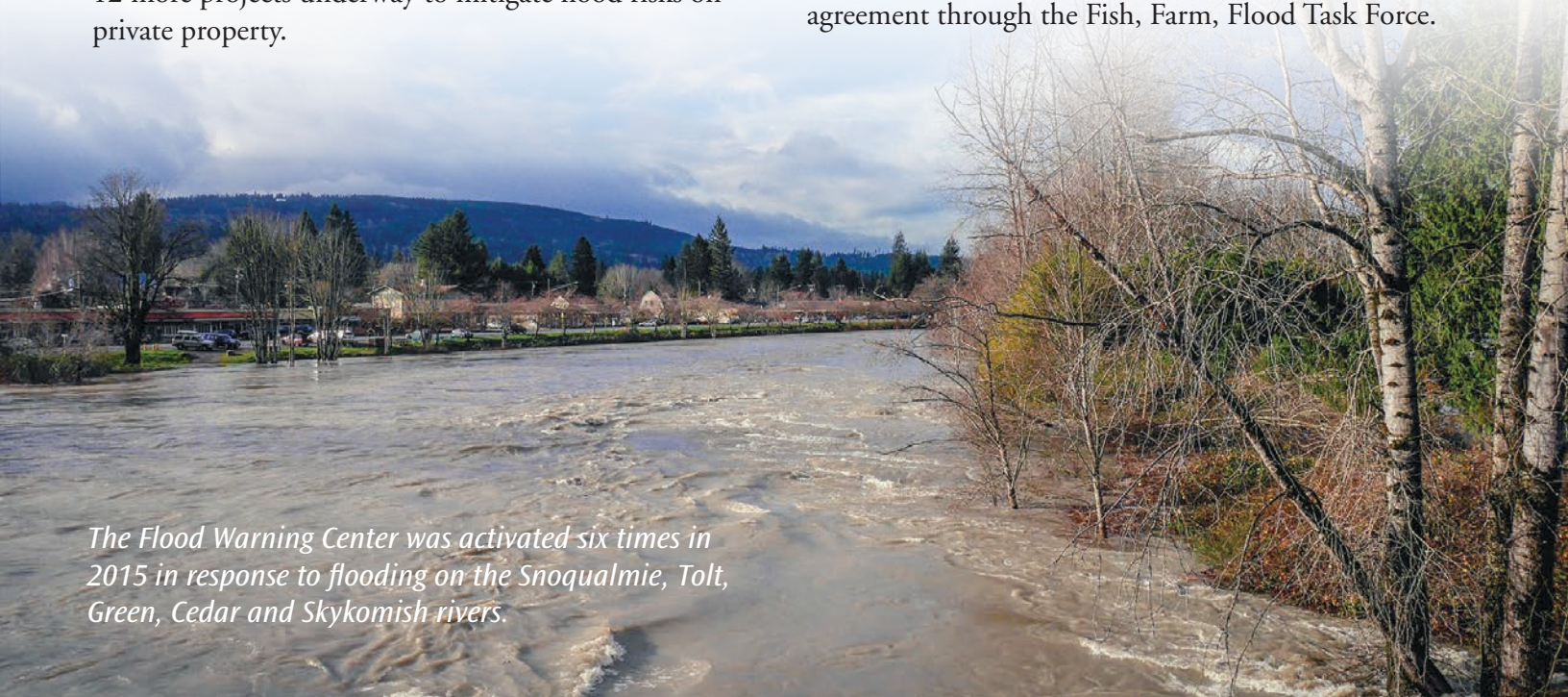
Science Section and Lab workers implemented several environmental monitoring programs, including fresh and marine water quality, stream flow and temperature, groundwater, toxics, swimming beaches, and stream health. Lab workers also responded to 32 trouble calls, including monitoring following sewage overflows.

### *Outlook*

Priorities for 2016 include delivering recommendations to the Executive and County Council on how the County’s Department of Transportation Roads Services Division and the Stormwater Program can address aging drainage infrastructure. Employees will develop a new Surface Water Management rate proposal, and continue implementing the Executive’s Local Food Initiative.

Division employees will work with salmon recovery interests, landowners and stakeholders on a long-term agreement through the Fish, Farm, Flood Task Force.

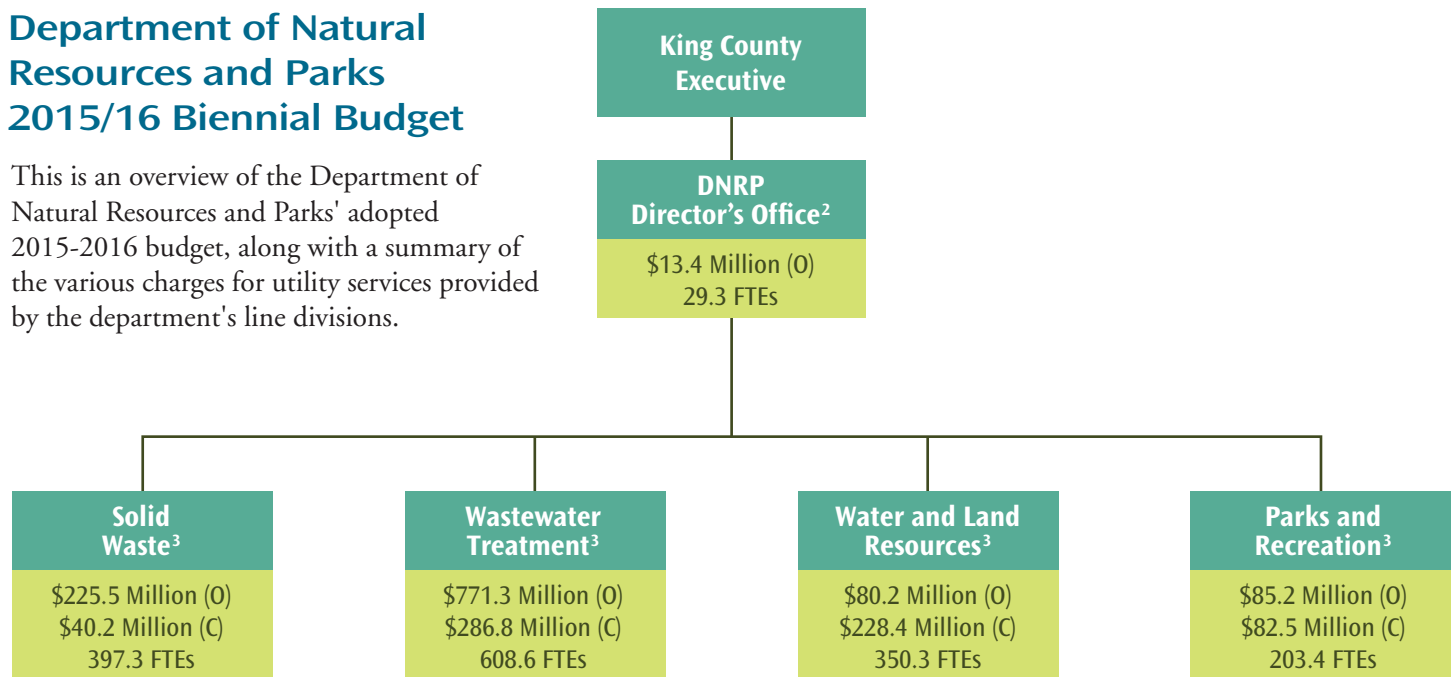
*The Flood Warning Center was activated six times in 2015 in response to flooding on the Snoqualmie, Tolt, Green, Cedar and Skykomish rivers.*



# DNRP FINANCIALS

## Department of Natural Resources and Parks 2015/16 Biennial Budget

This is an overview of the Department of Natural Resources and Parks' adopted 2015-2016 budget, along with a summary of the various charges for utility services provided by the department's line divisions.



(O) = Operating Budget  
(C) = Capital Budget

<sup>1</sup> King County appropriates budgets on a biennial cycle, and represent two years of expenditure authority, including supplemental appropriations.

<sup>2</sup> Includes budget for Historic Preservation Program (3.75 FTE's) and Community Service Area Program (4 FTE's)

<sup>3</sup> Includes operating and YSFG expenditures.

## Department of Natural Resources and Parks Rate Summary

	2006 Actual	2007 Actual	2008 Actual	2009 Actual	2010 Actual	2011 Actual	2012 Actual	2013 Actual	2014 Actual	2015 Actual	2016 Adopted
<b>Solid Waste Enterprise</b>											
Rate per ton at SWD transfer stations	\$82.50	\$82.50	\$95.00	\$95.00	\$95.00	\$95.00	\$109.00	\$120.17	\$120.17	\$120.17	\$120.17
Change from previous year	0%	0%	15.2%	0%	0%	0%	14.7%	10.2%	0%	0%	0%
Regional Direct Fee (\$/ton)	\$69.50	\$69.50	\$80.00	\$80.00	\$80.00	\$80.00	\$93.50	\$93.50	\$93.50	\$93.50	\$93.50
Change from previous year	0%	0%	15.1%	0%	0%	0%	16.9%	0%	0%	0%	0%
<b>Wastewater Treatment Enterprise</b>											
Monthly rate per household (\$/RCE)	\$25.60	\$27.95	\$27.95	\$31.90	\$31.90	\$36.10	\$36.10	\$39.79	\$39.79	\$42.03	\$42.03
Change from previous year	0%	9.2%	0%	14.1%	0%	13.2%	0%	10.2%	0%	5.6%	5.6%
<b>Surface Water Management Program</b>											
Monthly rate per household <sup>1</sup>	\$8.50	\$9.25	\$9.25	\$9.25	\$9.25	\$11.08	\$11.08	\$12.58	\$14.29	\$14.29	\$14.29
Change from previous year	0%	8.8%	0%	0%	0%	19.8%	0%	13.5%	13.6%	0%	0%
<b>Inflation Rate</b>											
(Change from previous year) <sup>2</sup>											
Seattle Consumer Price Index (CPI)	3.7%	3.9%	4.2%	0.6%	0.3%	2.7%	2.5%	1.2%	1.8%	1.4% <sup>3</sup>	2.4% <sup>3</sup>

<sup>1</sup> Billed twice per year

<sup>2</sup> Source: U.S. Bureau of Labor Statistics (CPI-U for Seattle MSA)

<sup>3</sup> For 2016, forecasted change - Puget Sound Economic Forecaster, December 2015



# CONTACT US

## KING COUNTY EXECUTIVE

Dow Constantine  
Phone: 206-263-9600  
[www.kingcounty.gov/exec/](http://www.kingcounty.gov/exec/)

## DEPARTMENT OF NATURAL RESOURCES AND PARKS

Christie True, Director  
201 S. Jackson St, Suite 700  
Seattle, WA 98104  
Phone: 206-477-4700  
[www.kingcounty.gov/dnrp](http://www.kingcounty.gov/dnrp)

### Parks and Recreation Division

Kevin Brown, Director  
201 S. Jackson St, Suite 700  
Seattle, WA 98104  
Phone: 206-477-4527  
[www.kingcounty.gov/parks](http://www.kingcounty.gov/parks)

### Solid Waste Division

Pat McLaughlin, Director  
201 S. Jackson St, Suite 701  
Seattle, WA 98104  
Phone: 206-477-4466  
[www.kingcounty.gov/solidwaste](http://www.kingcounty.gov/solidwaste)

### Wastewater Treatment Division

Pam Elardo, Director  
201 S. Jackson St, Suite 505  
Seattle, WA 98104  
Phone: 206-477-5371  
[www.kingcounty.gov/wtd](http://www.kingcounty.gov/wtd)

### Water and Land Resources Division

Mark Isaacson, Director  
201 S. Jackson St, Suite 600  
Seattle, WA 98104  
Phone: 206-477-4800  
[www.kingcounty.gov/wlr](http://www.kingcounty.gov/wlr)

## KING COUNTY COUNCIL

Rod Dembowski, *District 1*  
Larry Gossett, *District 2*  
Kathy Lambert, *District 3*  
Jeanne Kohl-Welles, *District 4*  
Dave Upthegrove, *District 5*  
Claudia Balducci, *District 6*  
Pete von Reichbauer, *District 7*  
Joe McDermott, *District 8*  
Reagan Dunn, *District 9*

Phone: 206-477-1000  
[www.kingcounty.gov/council](http://www.kingcounty.gov/council)

## Production Credits

### Editing/Project Management

Doug Williams,  
DNRP Public Affairs

### Design/Production

Laurel Preston, KCIT DNRP

### Content

Sonia-lynn R. Abenojar  
Karen Bergeron  
John Bodoia  
Sung Cho  
Rondolf De Guzman  
Rachel Dillman  
Richard Gelb  
LeAnne Hughes  
Terae Jones  
Beth Ledoux  
Matt Manguso  
Annie Kolb-Nelson  
Michael Murphy  
Rick Reinlasoder  
John Taylor  
Seattle Tilth  
Cody Toal  
Monica Van der Vieren  
Doug Williams

### Photos


Ned Ahrens  
Eli Brownell  
Matt Manguso  
Bill Priest  
Kim Stark  
Marie Trigona  
Jo Wilhelm



**Department of  
Natural Resources and Parks**  
201 South Jackson Street, Suite 700  
Seattle, WA 98104  
206-296-6500 [www.kingcounty.gov/dnrp](http://www.kingcounty.gov/dnrp)

To reduce printing and mailing costs, this annual report is available online. Learn about activities and accomplishments of DNRP in 2015 by visiting [kingcounty.gov/dnrp](http://kingcounty.gov/dnrp). Printed copies are available by request by calling 206-296-6500.

**Alternative formats available**  
**206-296-6500 TTY Relay: 711**

 100% Printed on recycled paper. Please recycle.  
File: 1603\_5228L\_dnrpANNrpt.indd  
KCIT GIS, Visual Communications and Web Unit